

## QING ZHU

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### EDUCATION:

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**Ph.D. 2014** Earth, Atmospheric and Planetary Sciences, Purdue University  
**B.S. 2009** Atmospheric Science, Nanjing University

### PROFESSIONAL EXPERIENCES:

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**2014-** Earth Science Division, Lawrence Berkeley National Lab  
**2009-2014** Ecosystems & Biogeochemical Dynamics Laboratory  
**2008-2009** Education Ministry Key Laboratory of Meso-scale Severe Weather

### HONORS AND AWARDS:

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**2013** Bilsland Dissertation fellowship  
**2010** Purdue graduate school incentive grant  
**2008** A first prize of Scientific and technological innovation Scholarship  
**2007** A third prize of People scholarship

### PUBLICATION

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**Zhu, Q.**, and Q. Zhuang: 2013, Improving the quantification of terrestrial ecosystem carbon dynamics over the conterminous U.S. using an adjoint method, *Ecosphere-data assimilation special feature*, 4:118. <http://dx.doi.org/10.1890/ES13-00058.1>.  
**Zhu, Q.**, and Q. Zhuang: 2013, Modeling the effects of organic nitrogen uptake by plants on the carbon and nitrogen cycling of boreal ecosystems, *Biogeosciences*, 10, 7943–7955.  
**Zhu, Q.**, and Q. Zhuang: 2013, Influences of calibration data length and data period on model parameterization and quantification of terrestrial ecosystem carbon dynamics, *Geosci. Model Dev. Discuss.*, 6, 6835-6865, doi:10.5194/gmdd-6-6835-2013.  
**Zhu, Q.**, and Q. Zhuang: 2014, Parameterization and sensitivity analysis of a process-based terrestrial ecosystem model using adjoint method, *J. Adv. Model. Earth Syst.*, 6, doi: 10.1002/2013MS000241.  
**Zhu, Q.**, Q. Zhuang, D. Henze, K. Bowman, M. Chen, Y. Liu, Y. He, H. Matsueda, T. Machida, Y. Sawa: 2014, Constraining terrestrial ecosystem CO<sub>2</sub> fluxes by integrating models of biogeochemistry and atmospheric transport and data of surface carbon fluxes and atmospheric CO<sub>2</sub> concentrations, submitted to *Atmospheric Chemistry and Physics*.

### PATENT

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Software application, 2013. patent # CN103293084 A. Sea fog all-time all-weather inversion method based on multispectral weather satellite information.

### PRESENTATION

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**Zhu, Q.**, 2014, Improving the predictability of global terrestrial ecosystem carbon budget using in situ and satellite observational data, departmental seminar, January 28<sup>th</sup>, Purdue University, West Lafayette, IN.  
**Zhu, Q.**, 2013, Revisit Terrestrial Ecosystem Model (TEM) parameterization techniques, NSF-CDI-Type II project meeting, November 7<sup>th</sup>, Purdue University, West Lafayette, IN.

## Curriculum Vitae

- Zhu, Q.**, and Q. Zhuang, 2013, Influence of data length and data coverage on model parameterization and in situ, regional quantifications of terrestrial ecosystem carbon dynamics, AGU annual meeting, December 9-14, San. Francisco, CA.
- Zhu, Q.**, and Q. Zhuang, 2011, Evaluating the role of organic N uptake in carbon dynamics of boreal terrestrial ecosystems, AGU annual meeting, December 5-9, San. Francisco, CA.
- Zhu, Q.**, and Q. Zhuang, 2011, Atmospheric CO<sub>2</sub> signals response to terrestrial ecosystem organic nitrogen uptake dynamics at Northern high latitude region, 5<sup>th</sup> International GEOS-Chem meeting, May 5-9, Cambridge, MA.

### TEACHING

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- Zhu, Q.** 2012, Parameterization of TEM by using adjoint technique, Guest Lecture, EAS 59230, November 6<sup>th</sup>, Purdue University, West Lafayette, IN.
- Zhu, Q.** 2012, Modeling the carbon and nitrogen cycles of boreal ecosystems, Guest Lecture, EAS 59230, September 6<sup>th</sup>, Purdue University, West Lafayette, IN.